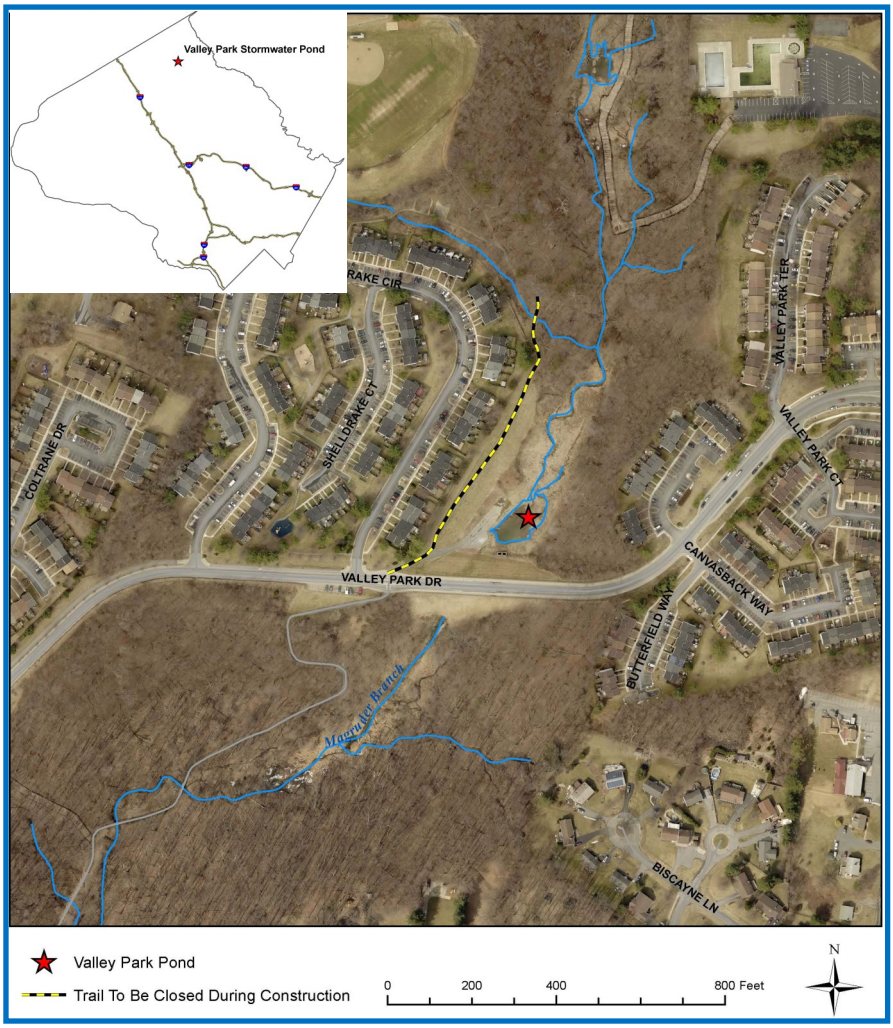
DEPARTMENT OF ENVIRONMENTAL PROTECTION
MONTGOMERY COUNTY, MARYLAND

Storm Water Management Facility Retrofit FACT SHEET: February, 2018

Valley Park Regional Stormwater Management Pond



Valley Park Storm Water Management Facility Facts:

Original Pond Construction Date: 1984

Drainage Area: 227 acres

Impervious Cover: 74 acres (32.5%)

Property Ownership: Maryland National Capital Park and Planning Commission

Watershed: Great Seneca Creek - Magruder Branch

Limits of Disturbance: 2 Acres

Project Status: Construction Complete

Construction Start Date: November 2016

Construction Completion Date: June 2017

Restoration Goals:
Upgrade stormwater pond to comply with current Maryland (MDE) storm water management regulations and safety standards, repair and upgrade pond infrastructure, improve water quality in the pond and downstream in Magruder Branch, improve aquatic vegetation in and around the stormwater pond.

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Project Selection

As part of Montgomery County's ongoing commitment to protect and improve our water resources, Valley Park Pond was identified for improvements to repair and replace aging infrastructure and bring the pond into compliance with current safety and water quality performance standards set by Maryland Department of the Environment (MDE). The Montgomery County Department of Environmental Protection (DEP) has evaluated the biological, chemical, and habitat condition of streams throughout the county, and identified impaired "priority" sub-watersheds for restoration. Magruder Branch, which receives water from the Valley Park Pond, was identified as impaired and recommended for restoration. Improvements to the Valley Park pond are part of the Magruder Branch watershed restoration effort. The project is listed in the Great Seneca Watershed Implementation plan which details how the county will improve water quality in streams and meet requirements issued by the state of Maryland. Additionally, this facility was chosen for improvements because of its age and need of maintenance.

Pre-Retrofit Conditions

Valley Park Pond was constructed in 1984, prior to current stormwater management regulations and receives runoff from 227 acres which includes most of Damascus town center. Uncontrolled storm water runoff from impervious surfaces such as roads, parking lots and rooftops causes erosive, high velocity or "flashy" storm flows that erode stream channels resulting in significant amounts of sediment deposited in downstream waterbodies such as Valley Park Pond. The pond has effectively trapped the sediment, preventing it from impacting aquatic habitat downstream in Magruder Branch, achieving one of it's primary objectives. However, the existing riser structure does not meet current MDE storm water management standards allowing higher flow rates to pass through the riser structure during storms than is currently permitted. Additionally, the water storage capacity has diminished over it's service life due to sediment deposition in the pond.

Post-Retrofit Conditions

To achieve the required water storage volume, accumulated sediment was removed from the pond and the permanent pond level was raised from the pre-existing level by 5.5 feet. Now that the sediment has been removed and the riser modified, pond depth varies from 1 foot around the perimeter to 12 feet in front of the riser structure. A forebay at the upper end of the pond was constructed to trap sediment and debris for easier removal during periodic pond maintenance. Around the perimeter of the pond wetland perennial plants were planted to provide habitat for aquatic organisms, pollinators, birds and other pond life. Trees and shrubs were planted upslope from the waters edge and a large area of wildflower meadow was established between the hiker/biker trail and the pond (see reverse side for list of plants). A six foot wide strip of turf grass will be maintained between the hiker/biker trail and the wildflower meadow.

Valley Park Pond - **Before Retrofit**: debris and sediment buildup during the facility's 32 year service life reduced water storage capacity.

Valley Park Pond - **After Retrofit**: Sediment removed, water storage capacity restored and native plantings around the pond perimeter improve aquatic habitat and ecology in the pond.

Pond Improvement Actions

- Remove accumulated sediments to provide the required storage volume
- Increase the permanent pool depth by 5.5 feet at the riser resulting in pond depth from between 1 and 12 feet
- Construct a forebay at the upper end of the pond to intercept sediment and debris for removal during future pond maintenance
- Modify the riser structure to comply with current stormwater criteria and replace aging infrastructure
- Install a safety bench around the entire perimeter of the pond
- Landscape pond perimeter and surrounding side slopes with native plants to improve water quality and habitat for pond wildlife
- Stabilize storm drain outfalls around the pond with appropriate riprap stone to prevent erosion from stormflows into the pond

Pond Landscaping Plant List

Trees and Shrubs	
Red Maple	7
White Oak	6
Red Oak	8
Buttonbush	57
Winterberry	78

Wetland Perennials	
Pickerelweed	200
Rose Mallow	200
Blue Flag Iris	200
Threesquare	200
Soft Rush	200
Joe Pye Weed	120
Virginia Wildrye	120
Loosestrife	120
Goldenrod	120
Common Rush	120

Wildflower Meadow Seed Mix
Deartongue
Virginia Wildrye
Broomsedge
Purpletop
Blackeyd Susan
Purplestem Aster
Early Goldenrod

Rosemallow, Hibiscus

Pickerelweed

Common Threesquare

For more information:

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https://www.montgomerycountymd.gov/DEP/Restoration/valley-park.html